



**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

#10  
Wheeler  
6/10/03

**In re Application of:**

Michael B. Ball

**Serial No.:** 09/427,123

**Filed:** October 22, 1999

**For:** MULTI-CHIP STACKED DEVICES

**Examiner:** R. Potter

**Group Art Unit:** 2822

**Attorney Docket No.:** 2818.1US  
(92-0399.1-RE)

**CERTIFICATE OF MAILING**

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**SUPPLEMENTAL REISSUE DECLARATION**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

The undersigned declarant, Michael B. Ball, states and declares as follows:

Every error in the patent which is corrected in the above-referenced reissue application, and which is not covered by the prior oath(s) and/or declaration(s) submitted in this application, arose without any deceptive intention on the part of the applicant.

The errors that are identified herein are in addition to those identified in the Reissue Declarations that were previously submitted in the above-referenced application.

Claim 1 improperly limited the thickness of the first thin adhesive layer to about 0.001 inches. This has been replaced with a corrected range of about 0.001 inches to about 0.005 inches.

Also, claim 1 improperly referred to "a plurality of thin wires having a first low-loop wire bond to a plurality of first die-bonding pads, said first wire bond having a wire height above the first die-bonding pads of about 0.006 inches, and a second wire bond to a plurality of adjacent lead-frame

lead fingers.” As is evident from reading this section of claim 1, it inconsistently includes singular and plural forms of the various elements recited therein, and refers to various elements in an inconsistent manner. These errors have been corrected by replacing the prior recitation with, “a plurality of thin wires having first low-loop wire bonds to a plurality of first die-bonding pads, said first low-loop wire bonds having wire heights above the first die-bonding pads of at most about 0.006 inches, and other wire bonds to a plurality of adjacent lead frame lead fingers . . .”

Additionally, the “wire heights of above the first die-bonding pads” were previously limited to 0.006 inches, while it appears that dimensions less than that are also patentable. Accordingly, claim 1 has been revised to recite “*at most* about 0.006 inches . . .” (emphasis supplied).

The second-thin adhesive layer of claim 1, as well as the additional subsequent layers of adhesive thereof, were limited to having dimensions of about 0.008 inches, whereas dimensions of “about 0.008 inches to about 0.010 inches” appear to be patentable for each of these elements.

The recitation of “a second plurality of thin wires having low-loop wire bonds” has been replaced with “a second plurality of thin wires having second low-loop wire bonds” to eliminate any confusion between the low-loop wire bonds of the first thin wires and those of the second thin wires.

Further, claim 1 recites “a total encapsulated-package height [of] about 0.110 inches,” while lesser heights also appear to be patentable. For this reason, the preceding recitation of claim 1 has been replaced with “a total encapsulated package height [of] at most about 0.110 inches.

Other typographical corrections have also been made to claim 1.

Finally, the lettering has been removed from the various sections of claim 1, as such was unnecessary.

With respect to independent claim 2, several similar errors were also present.

Specifically, claim 2 improperly referred to “a plurality of thin wires having a first low-loop wire bond to a plurality of first die-bonding pads, said first wire bond having a wire height above the first die-bonding pads of about 0.006 inches and a second wire bond to a plurality of adjacent lead-frame lead fingers.” As is evident from reading this section of claim 2, it inconsistently includes singular and plural forms of the various elements recited therein, and refers to various elements in an inconsistent manner. These errors have been corrected by replacing the prior recitation with, “a plurality of thin wires having first low-loop wire bonds to a plurality of first

die-bonding pads, said first low-loop wire bonds having wire heights above the first die-bonding pads of at most about 0.006 inches, and other wire bonds to a plurality of adjacent lead frame lead fingers . . .”

Additionally, the “wire heights of above the first die-bonding pads” were previously limited to 0.006 inches, while it appears that dimensions less than that are also patentable. Accordingly, the revision of claim 2 to recite “*at most* about 0.006 inches . . .” (emphasis supplied).

Prior to the amendments that are presented herein, claim 2 also recited “a total encapsulation-layer height [of] about 0.070 inches.” This recitation is somewhat unclear, as it could be read to define the thickness of the encapsulation-layer rather than the height of the entire encapsulated package. Accordingly, the preceding recitation of claim 2 has been replaced with “a total encapsulation layer height above an uppermost die of the multiple-die, low-profile stack [of] about 0.010 inches to about 0.012 inches.

Other typographical corrections have also been made to claim 2.

Finally, the lettering has been removed from the various sections of claim 1, as such was unnecessary.

I hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Date: 4/28/03

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